

What is claimed is:

1. A slitting mechanism for a printer such as a wallpaper printer, the slitting mechanism comprising:

a chassis having end plates;

5 the end plates being separated by a transverse portion of the chassis to allow a web of media to pass between them;

one or more rotating slitting shafts extending between the end plates, each shaft having one or more slitters arranged along its length, each slitter having a cutting edge; and

the slitting mechanism selectively engageable to either enter or not enter a path followed by the web

10 according to an input provided by an operator of the printer.

2. A slitting mechanism as claimed in claim 1, wherein:

the slitting mechanism further comprises a pair of rotating end brackets between which extend the one or more slitting shafts, at least one of the brackets rotated by a motor carried by an end plate.

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3. A slitting mechanism as claimed in claim 2, wherein:

there are two or more slitting shafts arranged around a central support shaft all of which are carried between and by the brackets.

20 4. A slitting mechanism as claimed in claim 1, further comprising:

a guide roller which extends between the end plates and under the path of the media;

the guide roller having a number of circumferential grooves, one groove corresponding to the location of each cutting disk associated with the slitting mechanism.

25 5. A slitting mechanism as claimed in claim 1, further comprising:

a guide roller which extends between the end plates and under the path of the media;

the guide roller having a number of circumferential grooves, one groove corresponding to the location of each cutting disk associated with the slitting mechanism;

each slitting shaft having an arrangement of cutting disks on it and each shaft is positionable such that each cutting disk carried by a selected shaft enters a corresponding groove of the guide roller when the selected shaft is rotated into a cutting position.

5 6. A slitting mechanism as claimed in claim 5, wherein:
each slitting shaft has a different arrangement of cutting disks on it.

7. A slitting mechanism as claimed in claim 1, wherein:
the slitting mechanism rotates into a selected position in response to a signal from a processor in a self
10 contained wallpaper printer in which the mechanism is located, the position of the slitting mechanism
determining a width or widths of wallpaper, based on a discrete number of width options provided to the
operator, an operator's selection being determined by the processor from an input provided by the operator to
the printer.

15 8. A slitting mechanism as claimed in claim 1, further comprising:
a transverse cutter extending between the end plates;
the blade supported at each end to perform a cutting motion which begins on one side of the web and finished
20 on an opposite side of the web.

9. A slitting mechanism as claimed in claim 8, wherein:
one end plate supports a motor which is coupled to the blade.

25 10. A slitting mechanism as claimed in claim 8, wherein:
the blade has a driven end that is carried eccentrically by a rotating member.

11: A slitting mechanism as claimed in claim 10, wherein:
each end of the blade is carried eccentrically by a rotating member.

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12. A slitting mechanism as claimed in claim 1, wherein:

the end plates have extending between them a pair of entry rollers in proximity, at least one of the entry rollers being powered.

5 13. A slitting mechanism as claimed in claim 12, wherein:

the end plates have extending between them a pair of exit rollers in proximity, at least one of the exit rollers being powered.

10 14. A slitting mechanism as claimed in claim 13, wherein:

the end plates have extending between them a pair of exit rollers in proximity, at least one of the exit rollers being powered;

one each of the entry and exit rollers powered by a single motor carried by the chassis.

15 15. A slitting mechanism as claimed in claim 14, wherein:

the one each of the entry and exit rollers are powered by a belt which passes around the one each of the entry and exit rollers and a rotating shaft associated with the motor.

16. A slitting mechanism as claimed in claim 15, wherein:

20 the belt is external to an end plate which carries it.

17. A slitting mechanism as claimed in claim 8, wherein:

the cutting motion is initiated by a signal from a processor in a self contained wallpaper printer in which the cutter is located, the operation of the cutter determining a length of wallpaper, the length being determined by

25 an input provided by an operator of the printer.

18. A slitting mechanism as claimed in claim 7, wherein:

the input is provided through a touch screen video display located on the printer.

19. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web such that the media is printed by the printhead at a rate exceeding 0.02 square meters per second (775 square feet per hour).
- 5 20. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web such that the media is printed by the printhead at a rate exceeding 0.1 square meters per second (3875 square feet per hour).
- 10 21. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web such that the media is printed by the printhead at a rate exceeding 0.2 square meters per second (7750 square feet per hour).
- 15 22. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead has more than 7680 nozzles.
23. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead has more than 20,000 nozzles.
- 20 24. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead has more than 100,000 nozzles.
25. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead has more than 250,000 nozzles.
- 25 26. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead prints ink drops with a volume of less than 5 picoliters.

27. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead prints ink drops with a volume of less than 3 picoliters.

5 28. A slitting mechanism as claimed in claim 1 wherein the printer has a full width digital color printhead located in the path followed by the web and the printhead prints ink drops with a volume of less than 1.5 picoliters.

29. A slitting mechanism as claimed in claim 1 wherein the printer comprises:

10 a cabinet in which is located a media path which extends from a media cartridge loading area to a winding area;
a full width digital color printhead located in the media path;
a processor which accepts operator inputs which are used to configure the printer for producing a particular roll; and
15 the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

30. A slitting mechanism as claimed in claim 1 wherein the printer uses a media cartridge, the media cartridge comprising:

a case in which a roll of blank media may be deployed;
20 the case having two halves, hinged together, an area between the two halves, when closed, defining a media supply slot; and
the case having internally and adjacent to the slot, a pair of rollers, at least one of the rollers being a driven roller which is supported at each end, by the case, for rotation by an external motor.

25 31. A slitting mechanism as claimed in claim 1 wherein the printer produces rolls of wallpaper that can be carried by a consumer tote, the tote comprising:
a disposable exterior in which is formed a main access flap and a pair of core access openings; and
the tote having an interior in which is located a disposable core which is aligned with the access openings.

32. A slitting mechanism as claimed in claim 1 wherein the printer has a transverse cutter, the transverse cutter comprising:

a chassis having end plates;

the end plates being separated to allow a web of media to pass between them;

5 the end plates supporting between them a cutting blade; and

the blade supported at each end to perform a cutting motion which begins on one side of the web and finishes on an opposite side of the web.

33. A slitting mechanism as claimed in claim 1 wherein the printer has a dryer for a printer such as a

10 wallpaper printer, the dryer comprising:

a compartment with a top opening for receiving a media web fed from the printer;

a source of heated air located above the top opening for blowing heated air into the opening to dry printing on the media web.

15 34. A slitting mechanism as claimed in claim 1 wherein the printer is adapted to produce rolls of wallpaper, the printer comprising:

a cabinet in which is located a media path which extends from a media loading area to a winding area;

a printhead located in the media path;

a processor which accepts operator inputs from one or more input devices which are used to configure the

20 printer for producing a particular roll; and

the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer wherein,

the length and design of the roll are determined by the operator inputs.

25 35. A slitting mechanism as claimed in claim 1 wherein the printer is adapted to print wallpaper designs onto a web of media via a method comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a winding area, there being a printhead located in the media path, a processor which accepts operator inputs from one or more input devices;

using one or more input devices which communicate with the processor to capture data from an operator regarding a specification for an operator's requirements;

using the processor to operatively control the printer according to the data; and

printing a single roll of wallpaper, on demand, according to a selected pattern.

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36. A slitting mechanism as claimed in claim 1 wherein the printer is used in a method of operating a wallpaper printing business, comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a printhead and from the printhead to a dispensing slot;

10 using one or more printer input devices which communicate with a processor to capture data regarding one or more customer's requirements;

the data comprising at least a customer selected pattern;

printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern; and

charging a customer for the roll.

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37. A slitting mechanism as claimed in claim 1 wherein the printer is used in a method for operating a wallpaper printing franchise, comprising the steps of:

providing to franchisees, an on-demand printer comprising a cabinet in which is located a media path which extends from a media loading area to a printhead and from the printhead to a dispensing slot;

20 the printer having one or more printer input devices which communicate with a processor to capture data regarding one or more customer requirements, the data comprising at least a customer selected pattern; providing the franchisee with a collection of patterns in a digital storage medium that can be read by the printer;

enabling the franchisee to print a roll of wallpaper, onto a web of blank media, on demand, according to the

25 selected pattern; and

obtaining or attempting to obtain a fee from the franchisee.

38. A slitting mechanism as claimed in claim 1 wherein the printer comprises:

a frame in which is located a media path which extends from a media loading area to a winding area;

30 a printhead located across the media path;

one or more input devices for capturing operator instructions;
 a processor which accepts operator inputs which are used to configure the printer for producing a particular roll; and
 the winding area adapted to removably retain a core and wind onto it, wallpaper produced by the printer.

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39. A slitting mechanism as claimed in claim 1 wherein the printer is used in a method for printing wallpaper onto a web of media, comprising the steps of:

utilizing an on-demand printer comprising a cabinet in which is located a media path, there being a full width printhead located across the media path, there being a processor which accepts operator inputs from one or

10 more input devices and which controls the printer;

using one or more input devices which communicate with the processor to capture data from an operator regarding a specification;

running the printer according to the data;

printing a single roll of wallpaper, on demand, according to a selected pattern and configuration;

15 changing the pattern according to a new datum from an operator; and

then printing a new roll onto the same web.

40. A slitting mechanism as claimed in claim 1 adapted for use in a method for drying a moving web of media in the printer, the method comprising the steps of:

20 loading the web in a path that traverses a compartment in a dryer within the printer, the compartment having an opening across the top;

allowing the moving web to descend into the compartment, as required; and

blowing heated air from above the opening.

25 41. A slitting mechanism as claimed in claim 1 wherein the printer is used in a method of supplying a media web to a wallpaper printer, comprising the steps of:

opening a reusable case;

placing into the case a core onto which has been located a supply roll of blank wallpaper media;

supporting the core for rotation within the case;

30 leading a free edge of the roll between a pair of rollers and past an edge of the open case; then

with the rollers located within the case and on either side of the web, closing the case and loading it into a printer.

42. A slitting mechanism as claimed in claim 1 wherein the printer has a printhead assembly which prints
5 onto a moving web that follows a path, comprising:
a full width printhead located across the path;
the printhead comprising a color printhead which is at least as wide as the web;
the printhead being supplied with a number of different inks which are remote from the printhead and which
supply the printhead through tubes.

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43. A slitting mechanism as claimed in claim 1 wherein the printer comprises:
a housing in which is located a media path which extends from a blank media intake to a wallpaper exit slot;
a multi-color roll width removable printhead located in the housing and across the media path;
the printhead being supplied by separate ink reservoirs, the reservoirs connected to the printhead by an ink
15 supply harness, there being a disconnect coupling between the reservoirs and the printhead;
one or more input devices for capturing operator instructions;
a processor which accepts operator inputs which are used to configure the printer for producing a particular
roll.

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44. A slitting mechanism as claimed in claim 1 wherein the printer produces rolls of wallpaper that can be
carried by a consumer tote, the tote comprising:
a disposable exterior in which is formed a main access flap and a pair of core access openings;
the tote having an interior in which is located a disposable core which is aligned with the access openings;
both openings exposing a moulded coupling, one coupling attached to each end of the core, at least one of the
25 couplings being a driven coupling and adapted to engage a driving spindle that rotates the core.

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45. A slitting mechanism as claimed in claim 1 wherein the printer has a removable printhead assembly
which prints onto a moving web, the assembly comprising:
a full width stationary printhead located on a rail along which it slides for service and removal;
30 a number of replaceable ink reservoirs which supply the printhead with different inks;

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the printhead comprising a color printhead which is at least as wide as the web; and
 the printhead being supplied with the different inks through tubes which can be disconnected so the printhead may be removed.

- 5 46. A slitting mechanism as claimed in claim 1 wherein the printer is a self threading printer comprising:
 a media loading area adapted to support a media cartridge in a position so that a media supply slot of the
 cartridge is closely adjacent to a pilot guide;
 a cabinet housing a media path which extends from the pilot guide to a printed media dispensing slot;
 a printhead located across the media path;
- 10 a processor which accepts operator inputs which are used to configure the printer for producing a particular
 roll;
 a motor within the cabinet for advancing a media web out of the media cartridge; and
 one or more other motors adapted to urge the media along the path and out of the slot.
- 15 47. A slitting mechanism as claimed in claim 1 wherein the printer is used in a method for producing
 wallpaper on-demand, comprising the steps of:
 utilizing an on-demand printer comprising a cabinet in which is located a media path which passes a printhead
 on the way to a dispensing slot;
 selecting a pattern and a configuration;
- 20 using one or more printer input devices which communicate with a processor to input the pattern and the
 configuration; and
 printing a roll of wallpaper, onto a web of blank media, on demand, according to the selected pattern and
 configuration.